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OM protein - protein search, using sw model

Run on: January 7, 2002, 15:37:21 ; Search time 154.28 seconds

(without alignments)
296.716 Million cell updates/sec

Title: US-08-569-749-2

Perfect score: 3277

Sequence:

1 MHKTSORLFGPSYONIKS.....LRKCPICRGIKGVKRTLS 618

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 522463 seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing:

Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: /SID52/gcgcdata/geneseq/geneseq/AA1980.DAT:*
2: /SID52/gcgcdata/geneseq/geneseq/AA1981.DAT:*
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12: /SID52/gcgcdata/geneseq/geneseq/AA1991.DAT:*
13: /SID52/gcgcdata/geneseq/geneseq/AA1992.DAT:*
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17: /SID52/gcgcdata/geneseq/geneseq/AA1996.DAT:*
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22: /SID52/gcgcdata/geneseq/geneseq/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	3277	100.0	618	AAW19746	Human inhibitor of
2	3277	100.0	618	AAW13545	Human c-IAP1. Hom
3	3277	100.0	618	AAW13998	Human cellular inh
4	3247	99.1	618	AAW19583	Human apoptosis in
5	3247	99.1	618	AAW69296	Human H1AP-2 prote
6	3248	93.2	612	AAW13555	Murine c-IAP. Mus
7	2724	83.1	612	AAW63299	Murine H1AP-2 prot
8	2634	81.0	591	AAW19586	Mouse apoptosis in
9	2353	71.8	604	AAW19747	Human inhibitor of
10	2353	71.8	604	AAW13546	Human c-IAP2. Hom
11	2353	71.8	604	AAW52703	Human cellular inh

12	2353	71.8	604	AAW33987	Human cellular inh
13	2332	71.2	604	AAW19582	Human apoptosis in
14	2332	71.2	604	AAW69295	Human H1AP-1 prote
15	2326	71.0	438	AAW04583	Human inhibitor of
16	2172	66.3	600	AAW69298	Murine H1AP-1 prot
17	2148	65.5	602	AAW19585	Mouse apoptosis in
18	1678	51.2	1141	AAW50694	Human AP12-MLP chi
19	1593	46.6	306	AAW02925	Aglycotoxin conver
20	910	27.8	496	AAW19745	Mouse inhibitor of
21	909	27.7	497	AAW19581	Human X1AP protein
22	909	27.7	497	AAW69294	Human X1AP protein
23	909	27.7	497	AAW69294	Human X1AP protein
24	908	27.7	497	AAW69295	Human X1AP protein
25	874	26.7	496	AAW19584	Human X1AP protein
26	874	26.7	496	AAW69297	Murine X1AP protei
27	735.5	22.4	438	AAW19748	Drosophila inhibi
28	494	15.1	438	AAW48189	Drosophila mutant
29	490.5	15.0	438	AAW48190	Drosophila mutant
30	490	15.0	438	AAW48192	Drosophila wild-cy
31	490	15.0	438	AAW48192	Drosophila mutant
32	484	14.8	438	AAW48191	Drosophila mutant
33	482	14.7	438	AAW48196	Drosophila mutant
34	480	14.6	438	AAW48197	Drosophila mutant
35	479	14.6	438	AAW48193	Drosophila mutant
36	479	14.6	438	AAW48194	Neuronal apoptosis
37	463	14.1	1232	AAW98217	Neuronal apoptosis
38	463	14.1	1403	AAW20033	Amino acid sequenc
39	462.5	14.1	280	AAW31478	Human apoptosis in
40	462	14.1	1295	AAW14080	Human apoptosis in
41	462	14.1	1295	AAW09540	Neuronal apoptosis
42	462	14.1	1403	AAW20032	Conadrotropic hormo
43	462	14.1	1403	AAW14079	Human apoptosis in
44	462	14.1	1403	AAW09539	Human apoptosis in
45	462	14.1	1403	AAW88053	Human Nalp protein

ALIGNMENTS

AAW19746	1	AAW19746	standard; Protein: 618 AA.
XX	XX	AAW19746:	
AC	XX	16-SEP-1997	(first entry)
XX	XX		
DP	XX	Human inhibitor of apoptosis protein homologue M1HB.	
DE	XX		
KM	XX	Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; M1HB;	
KW	XX	degenerative disease; infectious disease; autoimmune disease;	
KW	XX	Cancer; therapy; diagnosis.	
OS	XX	Homo sapiens.	
XX	XX		
FT	FT	Key	Location/Qualifiers
FT	FT	Region	/label= BIR
FT	FT	Region	46..113
FT	FT	Region	184..250
FT	FT	Region	/label= BIR
FT	FT	Region	269..337
FT	FT	Region	/label= BIR
FT	FT	Region	569..606
FT	FT	Region	/label= RING_finger
PN	XX	W09723501-A1.	
PD	XX	03-JUL-1997.	
XX	XX		
FE	XX	20-DEC-1996;	96WD-AU00827.
XX	XX		
PR	XX	22-DEC-1995;	95AU-0007275.
XX	XX		

PA (AMRA-) AMRAD OPERATIONS PTY LTD.
 XX Vaux DL;
 XX WPI: 1997-350966/32.
 DR N-PSDB: AAT72711.
 XX
 PT Isolated protein homologues of viral inhibitors of apoptosis - used
 PT to modulate apoptosis for treatment of degenerative, infectious or
 PT autoimmune diseases and cancer
 XX
 PS Claim 8: Page 51-54; 136pp; English.
 CC Mammalian IAP homologue B (MIIB) (AAW19746) is a human homologue of
 CC baculovirus inhibitor of apoptosis protein (IAP). Its amino acid
 CC sequence was deduced from a cDNA clone (see also AAT72711). Isolated
 CC from a human foetal liver cDNA library using primers based on
 CC human EST sequences that resembled the BIR repeats of Oryza
 CC pseudotsugata polynucleoside virus IAP. IAP homologues (see also
 CC AAW19745 and AAW19747-52) and their derivatives and chemical analogues
 CC can be used in methods for modulating apoptosis in animal cells,
 CC specifically for treatment, by inhibition, of degenerative and
 CC infectious disease or, by promotion, of cancer and autoimmune
 CC disease.
 CC
 XX
 XX
 SO Sequence 618 AA;
 Query Match 100.0%; Score 3277; DB 18; Length 618;
 Best local similarity 100.0%; Pred. No. 1,3e-289;
 Matches 618; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MHKTSQRLPFGPSYONIKSIMEDSTILSDWTNSNKKMKYDSCELYRNSYTFEPAGY 60
 DB 1 mhktasqrlfpgpsyqnklsimedstllsdwtcnaqkmydfscelyrnsytfepagv 60
 QY 61 PVSESLARAGFYTYGVNDKVKFCGGLMDNMKLGDSPIQKHQLYPSCSFIONLVAS 120
 DB 61 pvserslaragfyytygvndkvkfcgglmldnmkldgsprkqkqlypscstlgnlvass 120
 QY 121 LGSTSKNTSPMRNSFAHSLSPITLHSHSLFSGSYSSLSPLNLSRAVEDISSRTNPSYA 180
 DB 121 lgstskntspmrnsfahslspitlshsslfsgsysslsplnlsravedissrtcnpya 180
 QY 181 MSTEERARLYTHMPLTFILSPSELARAGFYTYIGGDNVACFACGKLSMWEKDDAMSEH 240
 DB 181 msteearllythmwplicfispelagfyytggdnvacfcagkqlsmwepkddamseh 240
 QY 241 RHPFNPCLFENSLFETLRFSTISNLKQTHAAMRTFMYWSSVYVQPEGLASAGFYVGR 300
 DB 241 rthfnpcplfenslfetlrfstisnlsmqthaaamrtfmywpsvypvqglasaagfyyvgr 300
 QY 301 NDDVACFCCDGLKCMESGDDPWVBAKWFPRCEFLIRMGQEFVDEIDGRYPHLEQL 360
 DB 301 nddvacfccdgglrcwesgddpwvbnakwfpceflirmqgefvdeldgryphlleql 360
 QY 361 STSDTFGEENADPPIHFGGSESSSDAAMVMTFVRSALFMGFNDLYKOTVQSKILTT 420
 DB 361 stsdctgeenadpplihfpgseessedavmmfprvksalemgfndlykvqvgskiltt 420
 QY 421 GENVTVNDIYSALLNDEKREERKQAEEMASDDLIRKNHVALQOULTCVLPITD 480
 DB 421 genvtyndivysallnaedekreerkqaeemasddlirknmaletqqltclvpitld 480
 QY 481 NLLKANVINKEOHIIKOKOTPLQARELIDPIIVKMAAANFRKCKLEIDNSTLXKTLF 540
 DB 481 nllkanvinkeohllkqkqplqarelidpiliivkmaaanfrkckleisdclxknl 540
 QY 541 VKNKKKTYTFEDVSGLSLEQLRLLOEBRTCKVCMDKESVVFIPCGHLVVCQECAPSLR 600
 DB 541 vknmkkytftedvsglsleqlrlloebertckvcmdekessvvlpcghlvvcqecapslr 600
 QY 601 KCPICRGIIKGVTRFELS 618

DB 601 kcpicrgiikgvtrfels 618
 RESULT 2
 AAW13545
 ID AAW13545 standard; Protein: 618 AA.
 XX
 AC AAW13545;
 XX
 DF 22-JUL-1997 (first entry)
 XX
 DE Human C-IAP1.
 XX
 KW IAP: inhibitor; apoptosis; RING finger domain; restlinosis;
 KW myocardial infarction; nephritis; HIV.
 XX
 OS Homo sapiens.
 XX
 PN WO9706182-A1.
 XX
 PD 20-FEB-1997.
 XX
 PF 06-AUG-1996; 96WO-US12860.
 XX
 PR 08-DEC-1995; 95US-0569749.
 PR 08-AUG-1995; 95US-0512946.
 XX
 PA (TULAR-) TULARIK INC.
 XX
 PI Goeddel DV, Rothe M;
 DR WPI: 1997-154209/14.
 DR N-PSDB: AAT61590.
 XX
 PT Nucleic acids encoding cellular inhibitor of apoptosis proteins
 PT useful for apoptosis regulation in cells to reduce or increase
 PT apoptosis and for pharmacological screening
 XX
 PS Disclosure: Page 18-20; 35pp; English.
 CC The human cellular inhibitor of apoptosis proteins (C-IAP1/2 -
 CC AAT61590/761391) comprise a series of defined structural domain
 CC repeats and/or a RING finger domain. In particular, at least two of
 CC a first domain repeat (AAW13547 or AAW13548), a second domain repeat
 CC (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
 CC and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
 CC sequences derived from these human genes.
 CC The nucleic acid is used for recombinant prodn. of human cellular
 CC inhibitor of apoptosis protein which modulates apoptosis
 CC regulation. The nucleic acids are useful in therapies where
 CC increased cell-specific apoptosis is desired, e.g. in restlinosis,
 CC inflammatory disease states, myocardial infarction, glomerular
 CC nephritis, transplant rejection and infectious diseases, e.g. HIV.
 CC They can also be used in conditions requiring a reduction in
 CC apoptosis.
 CC
 XX
 SO Sequence 618 AA;
 Query Match 100.0%; Score 3277; DB 18; Length 618;
 Best local similarity 100.0%; Pred. No. 1,3e-289;
 Matches 618; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MHKTSQRLPFGPSYONIKSIMEDSTILSDWTNSNKKMKYDSCELYRNSYTFEPAGY 60
 DB 1 mhktasqrlfpgpsyqnklsimedstllsdwtcnaqkmydfscelyrnsytfepagv 60
 QY 61 PVSESLARAGFYTYGVNDKVKFCGGLMDNMKLGDSPIQKHQLYPSCSFIONLVAS 120
 DB 61 pvserslaragfyytygvndkvkfcgglmldnmkldgsprkqkqlypscstlgnlvass 120
 QY 121 LGSTSKNTSPMRNSFAHSLSPITLHSHSLFSGSYSSLSPLNLSRAVEDISSRTNPSYA 180

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Db 121 lgsstnsmpnshahlsplshsllsgssyslspnshavedlssstrlmpysa 180
Oy 181 mstearfltyhmwplfslspelaragfytgpgdrvacfacgklsnmekpdamsen 240
Db 181 msteearfltyhmwplfslspelaragfytgpgdrvacfacgklsnmekpdamsen 240
Oy 241 RRRFPNCPFLNSLETTLRFSSISLSMOTHAARMRTFMWPSVVPQEDLASAGFYVGR 300
Db 241 rrlfnpclflensletlrfsslsnsmqlhaarmrtfmwpsvvpqedlasagfyygr 300
Oy 301 NDVYKFCFCGGLRCWESGDDPWYEHAKRPPRCCEFLIMKGOEFVDEIOGRPHILBDL 360
Db 301 ndvkcfcfcgglrcwesgddpwvehakwprccelflimkgcvdeisgrphilleql 360
Oy 361 STSTTGENADPPILHFGPGESSSEDAVMNTPVYKSALEMGNBDLVKOTVOSKILTT 420
Db 361 ststtgenadppilhfgpgeesssedavmnltpvyskalemgnbdlvkqvskilftc 420
Oy 421 GENYKTVNDIVSALLNAEDEKREERKEKQAEEMASDDLSLRKRNALFOQLTCLPLTD 480
Db 421 genyktvndivsallnaedekreerekqaeemadslslrkrmalfqqltclvplld 480
Oy 481 NLKAWYINKEQHDIIKOKTOIPLOARELIDTILVKGMAANIFKNCLEIDSTLYKNLF 540
Db 481 nlkawyinkqehdilkqtkqiplqarelldtlvkgnaaanlfkncleidslyknlf 540
Oy 541 VDKMKYITPDEVSGISLEBOLRLQEFRTCKVMDKESVYVPIPGHLVWQECAPSLR 600
Db 541 vdkmkyitpdevsgisleeqlrrlqeerlckvmdkevsvfipghlvwqecapslr 600
Oy 601 KCPICRGITKGTVPFLS 618
Db 601 kpicrgitkgtvfls 618

RESULT 3
AAY33998 standard; Protein: 618 AA.
XX AAY33998:
XX 26-NOV-1999 (first entry)
XX Human cellular inhibitor of apoptosis-1 sequence.
XX DE Cellular inhibitor of Apoptosis-1; antisense; diagnostic; therapeutic;
XX KM c-IAP-1; prophyllaxis; infection; inflammation; tumor formation.
XX OS Homo sapiens.
XX PN US9598772-A.
XX PD 28-SEP-1999.
XX PF 03-DEC-1998; 98US-0205204.
XX PR 03-DEC-1998; 98US-0205204.
XX PA (ISIS-) ISIS PHARM INC.
XX PI Bennett CF, Cowsett LM, Ackermann EJ.
XX DB WRI: 1999-561047/47.
XX DR N-PSDB; AA222143.
XX Antisense compounds complementary to Cellular Inhibitor of Apoptosis-1
XX PT useful for e.g. diagnostics, therapeutics, and as research reagents -
XX Example 13: Columns 41-46; 32bp; English.
XX The invention provides antisense compounds of 8-30 nucleotides that
XX inhibit the expression of human Cellular Inhibitor of Apoptosis-1
CC

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CC (c-IAP-1) The antisense compounds may be used for diagnostics,
CC therapeutics (for modulating the expression of c-IAP-1), prophylaxis
CC (e.g. to prevent or delay infection, inflammation, or tumor formation),
CC as research reagents (e.g. to distinguish between members of a biological
CC pathway) and in kits. The present sequence represents the human cellular
CC inhibitor of apoptosis-1.
XX
SQ Sequence 618 AA:
Query Match 100.0%; Score 3277; Db 20; Length 618;
Best local similarity 100.0%; Pred. No. 1.3e-289;
Matches 618; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 1 MHTASQRLFPSPYONIXSIMEDSTILSDWTNSNKKMKYDPSCELYRMSTYSPFAGV 60
Db 1 mhtasqrlfpgspynqkksimedstllsdwtnskkmkydscelyrmstyslfpagv 60
Oy 61 PYSESLARAGFYTYGYNKVKVCFCCGIMLDMKLGDSPIOKHKOIYPCSTIONLVAS 120
Db 61 pysestaragfytgynkvkcfcgclmldmklgdspiokehkoilypcstionlvass 120
Oy 121 LGSSTKNTSPKRNSEFAHSLSPLEBSSLPSSYSSLSPLNRAVEDISSRTNPTSYA 180
Db 121 lgsstksntspkrnsfahslsplshsllsgssyslspnshavedlssstrlmpysa 180
Oy 181 MSTEERARFLTYHMWPLFSLSPELARAGFYTGPGDRVACFACGKLSNMKPDAMSEN 240
Db 181 msteearfltyhmwplfslspelaragfytgpgdrvacfacgklsnmekpdamsen 240
Oy 241 RRRFPNCPFLNSLETTLRFSSISLSMOTHAARMRTFMWPSVVPQEDLASAGFYVGR 300
Db 241 rrlfnpclflensletlrfsslsnsmqlhaarmrtfmwpsvvpqedlasagfyygr 300
Oy 301 NDVYKFCFCGGLRCWESGDDPWYEHAKRPPRCCEFLIMKGOEFVDEIOGRPHILBDL 360
Db 301 ndvkcfcfcgglrcwesgddpwvehakwprccelflimkgcvdeisgrphilleql 360
Oy 361 STSTTGENADPPILHFGPGESSSEDAVMNTPVYKSALEMGNBDLVKOTVOSKILTT 420
Db 361 ststtgenadppilhfgpgeesssedavmnltpvyskalemgnbdlvkqvskilftc 420
Oy 421 GENYKTVNDIVSALLNAEDEKREERKEKQAEEMASDDLSLRKRNALFOQLTCLPLTD 480
Db 421 genyktvndivsallnaedekreerekqaeemadslslrkrmalfqqltclvplld 480
Oy 481 NLKAWYINKEQHDIIKOKTOIPLOARELIDTILVKGMAANIFKNCLEIDSTLYKNLF 540
Db 481 nlkawyinkqehdilkqtkqiplqarelldtlvkgnaaanlfkncleidslyknlf 540
Oy 541 VDKMKYITPDEVSGISLEBOLRLQEFRTCKVMDKESVYVPIPGHLVWQECAPSLR 600
Db 541 vdkmkyitpdevsgisleeqlrrlqeerlckvmdkevsvfipghlvwqecapslr 600
Oy 601 KCPICRGITKGTVPFLS 618
Db 601 kpicrgitkgtvfls 618

RESULT 4
AAM19583 standard; Protein: 618 AA.
XX AAM19583:
XX 02-SEP-1997 (first entry)
XX Human apoptosis inhibitor H1AP-2.
XX DE Human apoptosis inhibitor H1AP-2; HIV; AIDS; neurodegeneration;
XX KM myelodysplastic syndrome; ischemia; myocardial infarction; stroke;
XX reperfusion injury; toxin-induced liver disease; gene therapy;
XX diagnosis.
KW

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CC liver nasopharynx, thyroid, central nervous system, prostate, colon,
 CC rectum, cervix or endometrium, particularly to increase their sensitivity
 CC to chemotherapeutic agents. High levels of the IAP or NAIP proteins are
 CC detected in many cancers and are associated with poor prognosis.
 CC resistance to chemotherapeutic agents and mutations in p53 (It is
 CC suggested that wild-type p53 suppresses transcription of the IAP or NAIP
 CC genes). Transgenic animals are used for testing the effects of antisense
 CC oligonucleotides and for screening for the inhibitors.

XX Sequence 618 AA:

Query Match 99.1%; Score 3247; DB 19; Length 618;

Best Local Similarity 99.4%; Pred. No. 7,2e-287;

Matches 614; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 MHKTSQRLFPQPSYONIKSIMEDSTILSDMTNSKQKMYDPSCELYRMSTSPAGV 60
 DB 1 mktksqrlfpqpsyniksimedstilsdwtunskqmydpscelymstyscpagv 60
 QY 61 PVSEKSLARAGFYTGVDKVKCFCCGLMDNWKLGDSPIQKHKOLYPCSF1QNLVSAS 120
 DB 61 pvserslaragfytygvndkvkcfccglmdnwklgdspikqkhqlypscsf1qnlvsas 120
 QY 121 LGSTSKNTSPMRNSFAHSLSPTEHSSLFSGYSLSLSPNLSRAVEDISSRTNPYSYA 180
 DB 121 lgstskntspmrnsfahslsptehsslfsgysls脾nlsravedissrtnpysya 180
 QY 181 MSTEARFLUTYHMPPLTFELSPSELARAGFYTGCDRVACFACCGKLSNMWEPKDDMSPH 240
 DB 181 msteearflutyhmppltfelspselaragfytgcdtracacgklsnmwepkddamseh 240
 QY 241 RHRFNCPEFLNSLETLRFESISLSMOTHAARMFTFMWPSVYVOPEDLASGFPYGR 300
 DB 241 rhrfncpelfnsletlrfesislsmothaarmftfmwpsvypvqeqdasgfyvgr 300
 QY 301 NDVVCFCDCGGLRCWESGDDPWEHAKWFPCEFLIRMKQGFVDEIOGRPHLEOLL 360
 DB 301 ndvvcfcdcgglrcwesgddpvehakwfpceflirmkqgfvdeldgryphlleql 360
 QY 361 STSDPTGEENADPPIIHFGPSESSSDAVMMNTPVKSALEMGFNBDLVKOTVOSKILT 420
 DB 361 stsdptgeenadppiihfgpssssedavmmntpvksalemgfnbdlvkvotvskilt 420
 QY 421 GENVYWDIVSALLNMEDEKREBEKXOAEEMASDDLSIRKRMALFQOLTCVPLTD 480
 DB 421 genyvtwdivsallnmedekrebekekxaeemasddlsirkrmalfqoltcvpltd 480
 QY 481 NILKANVINKEBHDIKQKQIYLOAKREIDTILVKGAAANIFKXNKLKIDSTLYKNLF 540
 DB 481 nilkanvinkebhdlkqkqiylqareldtlvkgaaanifkxnlkldstlyknlf 540
 QY 541 VDKNMKYIPTEDVSGLSLEBOLRLQEBRTKVCMDKEVSVVTPCGHLVWCDECAPSLR 600
 DB 541 vdknmkyiptedvsglslebolrlqebtrkvcmdkevsvvtpcghlvwcdecapslr 600
 QY 601 KCPICGILKGTVRTFLS 618
 DB 601 kcpicgilkgtvrtfls 618

RESULT 6

AAW13555 standard; Protein: 612 AA.

XX AAW13555;

XX 22-JUL-1997 (first entry)

XX Murine c-IAP.

XX IAP: inhibitor; apoptosis; RING finger domain; restinosis;
 KW myocardial infarction; nephritis; HIV.

XX Mus musculus.

XX M09706182-A1.

XX 20-FEB-1997.

XX 06-AUG-1996; 96WO-US12860.

XX 08-DEC-1995; 95US-0569749.

XX 08-DEC-1995; 95US-0512946.

XX (TULU-) TULARIX INC.

XX Goeddel DV, Rothe M;

XX WPL; 1997-154209/14.

XX N-PSDB; AAT61592.

XX Nucleic acids encoding cellular inhibitor of apoptosis proteins
 XX useful for apoptosis regulation in cells to reduce or increase
 XX apoptosis and for pharmacological screening

XX Disclosure: Page 28-29; 35pp; English.

The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
 AAT61590/T61591) comprise a series of defined structural domain
 repeats and/or a RING finger domain: in particular, at least two of
 a first domain repeat (AAW13547 or AAW13548), a second domain repeat
 (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
 and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
 sequence derived from these human genes.
 The nucleic acid is used for recombinant prodn. of human cellular
 inhibitor of apoptosis protein which modulates apoptosis
 regulation. The nucleic acids are useful in therapies where
 increased cell-specific apoptosis is desired, e.g. in restinosis,
 inflammatory disease states, myocardial infarction, glomerular
 nephritis, transplant rejection and infectious diseases, e.g. HIV.
 They can also be used in conditions requiring a reduction in
 apoptosis.

XX Sequence 612 AA:

Query Match 83.2%; Score 2728; DB 18; Length 612;

Best Local Similarity 83.4%; Pred. No. 1.4e-239;

Matches 517; Conservative 45; Mismatches 48; Indels 10; Gaps 6;

QY 1 MHKTSQRLFPQPSYONIKSIMEDSTILSDMTNSKQKMYDPSCELYRMSTSPAGV 60
 DB 1 mktksqrlfpqpsyniksimedstilsdwtunskqmydpscelymstyscpagv 60
 QY 61 PVSEKSLARAGFYTGVDKVKCFCCGLMDNWKLGDSPIQKHKOLYPCSF1QNLVSAS 120
 DB 61 pvserslaragfytygvndkvkcfccglmdnwklgdspikqkhqlypscsf1qnlvsas 120
 QY 121 LGSTSKNTSPMRNSFAHSLSPTEHSSLFSGYSLSLSPNLSRAVEDISSRTNPYSYA 180
 DB 121 lgstskntspmrnsfahslsptehsslfsgysls脾nlsravedissrtnpysya 180
 QY 181 MSTEARFLUTYHMPPLTFELSPSELARAGFYTGCDRVACFACCGKLSNMWEPKDDMSPH 240
 DB 181 msteearflutyhmppltfelspselaragfytgcdtracacgklsnmwepkddamseh 240
 QY 241 RHRFNCPEFLNSLETLRFESISLSMOTHAARMFTFMWPSVYVOPEDLASGFPYGR 300
 DB 241 rhrfncpelfnsletlrfesislsmothaarmftfmwpsvypvqeqdasgfyvgr 300
 QY 301 NDVVCFCDCGGLRCWESGDDPWEHAKWFPCEFLIRMKQGFVDEIOGRPHLEOLL 360
 DB 301 ndvvcfcdcgglrcwesgddpvehakwfpceflirmkqgfvdeldgryphlleql 360
 QY 361 STSDPTGEENADPPIIHFGPSESSSDAVMMNTPVKSALEMGFNBDLVKOTVOSKILT 418

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Db      354  stddpgeenadpvtvhtgpgg--ssedvymmtlpvkaalemgfstralvtgvtqql 412
Oy      419  TTGENYKTVNDIVSALLINAEDEKREFEKQAEEMASDDSLIRKRMALFOOLTCVLP 478
Db      413  atgenyrtvndivavllinaederreekerqteemaagdsllrkrmalfqqlhvip 472
Oy      479  LDNLKAVINKQEHDIKQKTOIPQARELIDTLVKGNAANIRKNCLEIDSTLYKN 538
Db      473  ldnllaesavlkqghdlttrkqtqrpqarelldvkvgnaaanlfknslkeldstlyen 532
Oy      539  LFVDKMKKYIPTEBVSGISLEBOLRLQERTCKYCKMDREVSVPFPCGHLVVCQECAPS 598
Db      533  lfvekmkmyipbedvsglsleegllrrlqgeertckvcmdevsivllpcghlvvcqecaps 592
Oy      599  LKRCPIRGITIKGTVRTFLS 618
Db      593  lkrcplrcgrlkgvtrflfs 612

RESULT 7
ID      AAM69299 standard; Protein; 612 AA.
Oy      AAM69299:
AC      AAM69299:
DT      13-NOV-1998 (first entry)
DE      Murine HIAP-2 protein.
KM      Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide;
KN      Proliferative disease; IAP; therapy; cancer; mouse; HIAP-2 protein.
OS      Mus sp.
PN      WO935693-A2.
PD      20-AUG-1998.
PF      13-FEB-1998; 98MO-1B00781.
PR      13-FEB-1997; 97US-0800929.
PA      (UYOT-) UNIV OTTAWA.
PI      Baid S, Korneluk R, Liston P, Mackenzie AE, Pratt C;
DR      MPI: 1998-467164/40.
DR      N-PSDB: AAV55043.
PT      Inducing apoptosis in proliferative mammalian cells with inhibitor
PT      of IAP or NAIP polypeptide - also methods for prognosis based on
PT      presence of IAP and NAIP, specifically applied to cancers involving
PT      p53 mutations
XX      PS
XX      Disclosure: Fig 6; 147pp: English.
XX      This sequence is the murine HIAP-2 protein, which is an inhibitor of
XX      apoptosis protein (IAP), and can be used in the method of the invention.
XX      The method is for enhancing apoptosis in cells from a mammal with
XX      proliferative disease by treatment with a compound that inhibits
XX      biological activity of an IAP or NAIP polypeptide. The inhibitor
XX      compounds are used to treat proliferative diseases, specially cancers of
XX      liver, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney,
XX      liver neoplasmy, thyroid, central nervous system, prostate, colon,
XX      rectum, cervix or endometrium, particularly to increase their sensitivity
XX      to chemotherapeutic agents. High levels of the IAP or NAIP proteins are
XX      detected in many cancers and are associated with poor prognosis.
XX      resistance to chemotherapeutic agents and mutations in p53 (it is
XX      suggested that wild-type p53 suppresses transcription of the IAP or NAIP
XX      genes). Transgenic animals are used for testing the effects of antisense
XX      oligonucleotides and for screening for the inhibitors.

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XX      Sequence      612 AA:
SO      Query Match
          83.1%; Score 2724; DB 19; Length 612;
          Best Local Similarity 83.2%; Pred. No. 3,3e-239;
          Matches 516; Conservative 46; Mismatches 48; Indels 10; Gaps 6;

Oy      1  MKHTASORLFPGPSYONIKRIMESTRILSDMTNSKQMKYDPCSELYMSTYTFPGV 60
Db      1  mktvsgqlggqlhnglkrimekstrilsmwksaekmktfdscelymstysfpgv 60
Oy      61  PVSESLARAGFYTVGVNDKVCFCGGLMDMKKIGSPLOXKOLYPSGSPITQWLVSAS 120
Db      61  pvserslaragfitygvndkvkfcogglmdmkkgdgspsvexhmqlypscslyqlsaa 120
Oy      121  LQSTSKNTSPMRNSFAHSLSPTEHSSLSFGSYSLSPNPLNBRAYEDISSRTNPISTA 180
Db      121  lqspsknmpvskrfahs-sp-ter---gshsnlcssplnsravedt-sarmdpccsya 173
Oy      181  MSTEBAFLTYHMPPLNPLSPSELARAGFYVIGPDVYACFACGKLSMWEKDDAMSEH 240
Db      174  msteearfltysmplslfspaellaragfyyigpdrvacyacgklsmwepkddamseh 233
Oy      241  RHHFPCFLNLSLETFRSISNLSKQTHAAMRTFMYSVVPQPEOLASAGFYVGR 300
Db      234  rthfphcplnletetqrfalslmqthartrfllwppsvvpqpeqlasagfyyvdr 293
Oy      301  NDDVKGPCCGDGLKQWESGDPVWEHAKWFPKCFELIMKGOEVDIGRYPHLLFQL 360
Db      294  nddvkfcocdgglkqewsgdpvwehkwfpkcfelilmkgelvdeiqeryphlleql 353
Oy      361  STSDTGTGERNDP--PIIHFGPCSSSEDAVMNTPVYKSLKMGFNRDLVQOTQSKIL 418
Db      354  stsdtpgeenadpvtvhtgpgg--ssedvymmtlpvkaalemgfstralvtgvtqql 412
Oy      419  TTGENYKTVNDIVSALLINAEDEKREFEKQAEEMASDDSLIRKRMALFOOLTCVLP 478
Db      413  atgenyrtvndivavllinaederreekerqteemaagdsllrkrmalfqqlhvip 472
Oy      479  LDNLKAVINKQEHDIKQKTOIPQARELIDTLVKGNAANIRKNCLEIDSTLYKN 538
Db      473  ldnllaesavlkqghdlttrkqtqrpqarelldvkvgnaaanlfknslkeldstlyen 532
Oy      539  LFVDKMKKYIPTEBVSGISLEBOLRLQERTCKYCKMDREVSVPFPCGHLVVCQECAPS 598
Db      533  lfvekmkmyipbedvsglsleegllrrlqgeertckvcmdevsivllpcghlvvcqecaps 592
Oy      599  LKRCPIRGITIKGTVRTFLS 618
Db      593  lkrcplrcgrlkgvtrflfs 612

RESULT 8
ID      AAM19586 standard; Protein; 591 AA.
Oy      AAM19586:
AC      AAM19586:
DT      02-SEP-1997 (first entry)
DE      Mouse apoptosis inhibitor M-HIAP-2.
XX      Apoptosis inhibitor; M-HIAP-2; HIV; AIDS; neurodegeneration;
XX      myelodysplastic syndrome; ischaemia; myocardial infarction; stroke;
XX      reperfusion injury; toxin-induced liver disease; gene therapy;
XX      diagnosis.
XX      Mus sp.
XX      Key      Location/Qualifiers
XX      FT      Domain      25..92
XX      FT      label= BIR-1

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Dbl 421 lnaedleivereerateekesndl|||lrkrmalfightcviplisiltaglinpeghd 480

OY 495 iRKQTOJPILOARELLIDTLVKGNAANIRKNCLEIDSTLYKKVLVDNMNVIFTEDEV 554
CC :||||| ||||||| ||||| |::| ::::|::|::|::|::|::|::|::|::|::|
Db 481 vlktgqtgsqarelidit||vxgnlaetvfirmsigaeavlyehlfvgdqilyptcdvs 540

OY 555 GLSLEOARRJOEFRTCKVKMDKEWVPFPCGHLVVOCECAPLAKRCPTCGIJKTVR 614
CC |::::|:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 541 dlpveeqzrrllrldgeatckvmdkevsflvpghlvexkdapsltkpclstsktjvcr 600

Oy 615 TFLS 618

Db 601 ffls 604

RESULT 11

ID AA152703 standard: Protein: 604 AA.

XX AA152703:

DT 26-JAN-2000 (first entry)

XX Human cellular inhibitor of apoptosis-2 protein.

DE Identification; genetic target; gene modulation; human;
KW antisense oligonucleotide; phosphorothioate; target validation;
XX nucleotide sequence-based technology; antisense drug discovery.
OS Homo sapiens.
XX MO9953101-A1.
PN 21-OCT-1999.
PD 13-APR-1999; 99MO-US08268.
PE 13-APR-1998; 98US-0081483.
PR 28-APR-1998; 98US-006763B.
PX (ISIS-) ISIS PHARM INC.
XX CASERT LM, Baker BF, McNeill J, Preter SM, Sasmor HM, Brooks DG;
P1 Onasi C, Wyatt JR, Borchers AH, Vickers TA;
DR NPSDB: AA241005.
NPI: 1999-620446/53.
Identifying compounds which modulate expression of nucleic acids, used
to provide compounds having defined physical, chemical or bioactive
properties, e.g. antisense activity -

Example 20: Page 197-202; 264pp; English.

XX A method has been developed of defining a set of compounds that modulatee
CC the expression of a target nucleic acid (tna) sequence via binding of
CC the compounds with the tna sequence. The method comprises generating a
CC library of virtual compounds in silico according to defined criteria,
CC and evaluating in silico the binding of the virtual compounds with the
CC tna according to defined criteria. Also described are: (1) a method of
CC defining a set of oligonucleotides (ONS) that modulate the expression of
CC a tna sequence via binding of the ONS with the tna sequence comprising
CC generating a library of virtual compounds in silico according to defined
CC criteria, and evaluating in silico the binding of the virtual ONS with
CC the tna according to defined criteria; and (2) a method of defining a
CC set of compounds that modulate the expression of a tna sequence via
CC binding of the compounds with the tna. The methods can be used for the
CC generalization and identification of synthetic compounds having defined
CC physical, chemical or bioactive properties. Information gathered from
CC assays of such compounds is used to identify nucleic acid sequences that
CC are tractable to a variety of nucleotide sequence-based technologies,
CC e.g. antisense drug discovery and target validation. AA240832 to
CC AA241220, and AA152701 to AA152706, represent sequences used in the

CC	exemplification of the present invention.
XX	Sequence 604 AA:
XX	Query Match 71.8%: Score 2353; DB 20; Length 604;
XX	Best Local Similarity 72.8%: Pred. No. 2, 1e-205;
XX	Matches 440; Conservative 71; Mismatches 7; Indels 6; Gaps 5;
QY	20 STMDSTSLSDWTNS-NKQKKKTKDFSCETCYEMSYSPAPPAGVPSESLRACAGFYTCVN 78
DB	2 nlyenslflslmksanfelkydlsclselymstyscrfagpyavscslaragfyytgvn 61
QY	79 DKVRCFCCGKLMDDKKLQDPSIKQKOLYPCSCSTQWKA-SIGRYSKNTSP--NRNRF 135
DB	62 dkveofccgmlmdnkkrgdpcektkhklypsccrfvqslmsvlnleatsqclfpssvtsr 120
QY	136 AHSLSPFLHSLSSGSLISLSPNPLNSRAAEVDSSTKRNPNVSYAMSREPARLYHMKP 195
DB	121 tnsllpplensytrgysmspsnpvnsfauqdsalmsrjsyhcammemarlflftcqp 180
QY	196 LTPFLSPSELARAGFYTCGDRVACACGCKLSHWPKDDANSEHRHFFPCFLENSL- 254
DB	181 lflslspcdlakagfyytggdrvaactacgkrlsmwepkdamsehltnfpkcpfldnqlr 240
QY	255 ETLREISLNSLWQTHAARMRTFEMYPSSVPVQBPQLASAGFYTCVGRNDYKCFCCDGLR 314
DB	241 dcsrtyvsnlsmqthlaarfkflmwpssvlynpqelasagfyyvgnedvkkcccdgglr 300
QY	315 CHESGDDPWYEHAKWFPKCEFLIRMGQEFYDEITQGRYPHLLLEOLLSTSDTTEENADP 374
DB	301 cvesadppwqghakwfpkceyllrlkygqefrlrqvqasyphlleqlldsfspgdnaess 360
QY	375 ITHGPPSSSEDAVMNMTPVYKSALEMGFNBDLVKQVOSKILTTGENTKYNDIVSL 434
DB	361 lthfepgednsedaImmnpvlnaaveomgfsrslvkvkltvgxkllatganyylvndlvidl 420
QY	435 LNAEDPEKREBEKQAEEMASDDLSLRKNRYALFQOLTCVPLTQNLTLKANYINKOEH 494
DB	421 lnaeqlreecereerleekesnollrlkrnmlfqlhltcvajldslsltaglneqehd 480
QY	495 ITRKQQTQPLQAEELIDPILYKGMAMANFKNKCKEIDSTIKKTLFVYKMKRYLPEDVS 554
DB	481 vkrqqtqqsqdelldtllykglactafnmslqeeavlyehlfyqgdtkypredts 540
QY	555 GSLSEQLRLQDEPRICVCMDKRENSVYTRPGCHULYVQECAPSLRKCPRLIKGYR 614
DB	541 dlprveqgtrrlqgeetrcvcmkxevslvllpghlrvvckdcapslrkcpelzstlkyvr 600
QY	615 rFLS 618
DB	601 tFLS 604
XX	RESULT 12
XX	AAAY33997
XX	ID AAAY33997 standard; Protein: 604 AA.
XX	AAAY33997:
XX	26-NOV-1999 (first entry)
XX	Human cellular inhibitor of apoptosis-2 sequence.
XX	Cellular inhibitor of Apoptosis-2; antiSense; diagnostic; therapeutic;
XX	c-IAP-2; prophylaxis; infection; inflammation; tumor formation.
XX	Homo sapiens.
XX	US5958771-A.
XX	26-SEP-1999.

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